

16/12/2015 الی، سہ

پی. م

نمبر 8

problem 1 - sheet 5:-

$$S \rightarrow NTS$$

terminals : 1, 2, a, b

$$N \rightarrow 1 \mid 2$$

$$T \rightarrow A \mid B \Rightarrow ((1/2)(a/b)^+)^+$$

$$A \rightarrow a \mid Ta$$

$$B \rightarrow b \mid Tb$$

problem 2 - sheet 5:-

$$\textcircled{1} L = \{a^{2n}b^m a^{3n}, n, m \geq 0\}$$

$$S \rightarrow aaSaaa \mid T$$

$$T \rightarrow bT \mid \epsilon$$

$$\text{OR } S \rightarrow aaSaa \mid T \mid \epsilon$$

$$T \rightarrow b \mid bT$$

$$n, m = 0 \rightarrow \epsilon$$

$$n = 0 \rightarrow b, bbbb \dots$$

$$m = 0 \rightarrow aa \quad aaa$$

$$n = 1, m = 1 \rightarrow aabaaa$$

$$\textcircled{2} S \rightarrow (S)$$

$$\textcircled{3} a, b, aa, bb, b_b, a_a$$

$$S \rightarrow b \mid a \mid aXa \mid bXb$$

$$X \rightarrow aX \mid bX \mid \epsilon$$

Quiz and midterm Solution
are uploaded